

High-temperature vacuum chamber...

S/032/62/028/010/009/009
B117/B186

the (130) line. At a plate voltage of 30 kv and a current of 2 ma, the exposure lasted 3 - 5 min. Spacings were determined with an accuracy of 0.02%. Results of the experiments agreed well with known literature data. There are 2 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut Akademii nauk USSR (Physico-technical Institute of the Academy of Sciences UkrSSR) ✓

Card 3/3

L 12792-63 EWP(q)/EWT(m)/BDS AFPTC/ASD WH/JD/JG

ACCESSION NR: AP3000779

S/0070/63/008/003/0451/0453

AUTHOR: Matyushenko, N. N.; Tikhinskiy, G. F.TITLE: Yttrium beryllide and compounds of the type ABe sub 13

SOURCE: Kristallografiya, v. 8, no. 3, 1963, 451-453

TOPIC TAGS: Be-Y alloys, intermetallic compounds, Sc, Hf, Zr, Mg, Er, Y, Ca, Am, Np, U, Pu, Th, Ce, La

ABSTRACT: The authors have studied the system Y-Be in order to establish the intermetallic compounds of the two and also to test the systematic pattern in compounds of the type ABe sub 13 according to their formula volumes. Values of the lattice constants were computed from x-ray powder diagrams, and these were used with the appropriate space group to determine the yttrium-beryllide formula. The experiments demonstrate that the cubic phase of YBe sub 13 (isomorphous with NaZn sub 13) exists. It has a lattice constant of $a = 10.238 \pm 0.002$ Angstrom. Known beryllides of the composition ABe sub 13 may be divided into three groups, depending on the ratio of total volume to volume of A components. These groups are: 1) Sc, Hf, Zr; 2) Mg, Er, Y, Ca, Am; and 3) Np, U, Pu, Th, Ce, La. Group (3) has a higher content of A components than group (2). Group (1) is distinct, but it was not computed. The authors conclude that the separation into groups is

Card 1/2

L 12792-63

ACCESSION NR: AP3000779

apparently associated with peculiarities in electron structure of the A components in their combination with beryllium. Orig. art. has: 2 figures and 1 table.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN USSR (Physical and Technical Institute, AN UkrSSR)

SUBMITTED: 24Oct62

DATE ACQ: 21Jun63

ENCL: 00

SUB CODE: 00

NO REF SCV: 006

OTHER: 005

Card 2/2

L 12596-63 EWP(q)/ZWT(m)/BDS JFTC/ASD JD
 ACCESSION NR: AP3001487 5/0078/63/008/007/1783/1783 58
 AUTHOR: Matyushenko, N. N.; Karyev, V. F.; Verkhovbin, L. F.
 TITLE: Beryllides of samarium, europium and ytterbium of composition ABe sub 13
 SOURCE: Zhurnal neorganicheskoy khimii, v. 8, no. 7, 1963, 1783
 TOPIC TAGS: beryllide, samarium, europium, ytterbium, intermetallic compound, X-ray analysis technique
 ABSTRACT: Surface layers of the intermetallic compounds are formed as a result of interaction of vapors of reduced metal with beryllium. Crystal structures were studied using X-ray analysis techniques.
 ASSOCIATION: Fiziko-tekhnicheskii institut Akademii nauk, USSR (Physico-Engineering Institute, Academy of Sciences, USSR).
 SUBMITTED 06Dec62 DATE ACQ: 02Aug63 ENCL: 00
 SUB CODE: CH, EL NO REF SOV: 008 OTHER: 002

Card 1/1

VERKHOROBIN, L.F.; GLUSHKO, P.I.; DOROKHOV, V.I.; MATYUSHENKO, N.N.

Interaction of molybdenum disilicide with beryllium. Fiz. met. 1
metalloved. 16 no.5:751-753 N '63. (MIRA 17:2)

1. Fiziko-tekhnicheskiy institut AN UkrSSR.

MATYUSHENKO, N.N. (Khar'kov)

Reactive diffusion in the system molybdenum - beryllium. Izv.
AN SSSR Met. i gor. delo : 6.2:167-171 (Nov'64) (MIRA 1766)

ACCESSION NO: AP4015261

S/0226/64/000/001/0020/0022

AUTHOR: Matyushenko, N. N.

TITLE: Thermal expansion of tungsten and molybdenum disilicides

SOURCE: Poroshkovaya metallurgiya, no. 1, 1964, 20-22

TOPIC TAGS: W, Mo, thermal expansion, thermal expansion coefficient, tungsten disilicide, molybdenum disilicide

ABSTRACT: There has been no information on the thermal expansion of WSi_2 , nor can this factor be evaluated from the linear expansion coefficients of W and Mo. It was the purpose of this work to measure the coefficient α of one of the disilicides and to check experimentally the relation between the thermal expansion of WSi_2 and $MoSi_2$. The experiments were conducted on single-phase molybdenum and tungsten disilicides obtained by the diffusion saturation of Mo and W sheets by silicon in vacuum. The samples were annealed until the metal was transformed completely into a disilicide. The mean coefficient of linear expansion of these metals was measured by the x-ray method. The results showed that: 1) the mean linear coefficient of expansion of $MoSi_2$ in the temperature interval 13-613C was $9.2 \pm 0.6 \times 10^{-6}$ degree⁻¹; 2) the mean coefficient of linear expansion of WSi_2 was smaller by about 3% than

Card 1/1

ACCESSION NO: AP4015261

that of MoSi_2 . Orig. art. has: 1 figure and 3 formulas.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN USSR (Institute of Physics and Technology AN UkrSSR)

SUBMITTED: 30Jan63

DATE ACQ: 12Mar64

ENCL: 00

SUB CODE: NL

NO REF SOV: 003

OTHER: 001

Card 2/2

MATYUSHENKO, N.N. [Matiushenko, N.N.]; KAREV, V.N. [Kariev, V.M.]; SVYNARENKO,
A.P. [Svynarenko, O.P.]

Beryllides of rare earth metals. Ukr. fiz. zhur. 8 no.11:1266-1267
11 '64. (MIRA 17:9)

1. Fiziko-tekhnicheskij institut AN UkrSSR, Khar'kov.

ACCESSION NR: AP4024994

S/0070/64/009/002/0273/0275

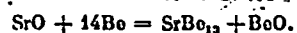
AUTHORS: Matyushenko, N. N.; Verkhorobin, L. F.; Karev, V. N.

TITLE: Strontium beryllide

SOURCE: Kristallografiya, v. 9, no. 2, 1964, 273-275

TOPIC TAGS: strontium beryllide, cubic lattice, stoichiometric formula, space group, x-ray diffraction, powder photograph

ABSTRACT: The compound was prepared by reducing SrO with Be, with the simultaneous formation of BeO according to the equation:



The powders were mixed and placed in a tantalum crucible, and the reaction was carried out in a vacuum of 10^{-3} mm Hg at a temperature of 1200-1250C. The product was a porous, light-brown mass. The presence of beryllide was established by x-ray studies. Powder photographs showed no BeO, but chemical analyses gave 11.8%

Card 1/2

ACCESSION NR: AP4024994

Characteristics established for the new compound are: stoichiometric formula of SrBe_{13} , crystalline structure of the NaZn_{13} type, space group O_h^6 - $Fm\bar{3}c$, parameters $y = 0.175$ and $z = 0.110$, cubic lattice with a lattice constant of $a = 10.157 \pm 0.001$ Å, computed density of 2.35 g/cm^3 ; Orig. art. has: 1 figure and 2 tables.

ASSOCIATION: Fiziko-tekhnicheskiiy institut AN UkrSSR (Physicotechnical Institute, AN UkrSSR)

SUBMITTED: 22Jul63

DATE ACQ: 16Apr64

ENCL: 00

SUB CODE: PH

NO REF SOV: 002

OTHER: 001

Cord 2/2

TRANSFER IMAGE SERIES 1000

ACCESSION NR: AP4015322

S/0032/64/030/001/0045/0046

AUTHORS: Karev, V. N.; Matyushenko, N. N.

TITLE: Absorption x ray analysis of molybdenum and beryllium alloys

SOURCE: Zavodskaya laboratoriya, v. 30, no. 1, 1964, 45-46

TOPIC TAGS: x ray analysis, x ray absorption, beryllium molybdenum alloy analysis, beryllide, radiation damping coefficient, x ray source 5BKHV1 W, molybdenum, silver, copper

ABSTRACT: In order to confirm the stoichiometric formula MoBe_{22} an absorption x-ray analysis was performed based on the measurement of the intensity of x-rays passing through a flat sample. A type 5BKHV1-W x-ray tube was used to excite a secondary emitter (Mo, Ag, Cu - 20-mm diameter, 0.2-0.3 mm thick), the rays were focused by a quartz crystal, passed through the sample, and were measured with a type MSTR-5 Geiger counter. Since the intensity is given by $I = I_0 e^{-\mu_m \rho_0}$ (where I_0 - initial intensity, μ_m - mass damping coefficient, ρ_0 - density of material)

Card 1/2

ACCESSION NR: AP4015322

while $\mu_m = \sum C_i \mu_i$, the damping coefficient changes linearly with beryllium content if only two components are present. The samples were prepared by evaporating a suspension of the beryllium compound. μ_{Be} and μ_{Mo} were measured on samples of beryllium (vacuum distilled, 3-5 mm thick) and molybdenum (10-50 micron thick). It was found that the molybdenum content by weight in molybdenum beryllide was 33.1% while its content in a heterogeneous alloy was 20.1%. This agrees well with other experiments and with values obtained by chemical analysis. It was found that the accuracy of this method decreases as the Mo content decreases, being 6% at a 10% weight content of Mo. Orig. art. has: 3 formulas, 1 figure, and 2 tables.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN UkrSSR (Physicotechnical Institute AN UkrSSR)

SUBMITTED: 00

DATE ACQ: 03Feb64

ENGL: 00

SUB CODE: M1

NO REF SOV: 002

OTHER: 000

Card 2/2

L 28409-66 EWT(m)/T/EWP(t)/ETI LIP(c) JD/JG/GD
 AGO NR: AT5027943 SOURCE CODE: UR/0000/63/000/000/0083/0086

AUTHOR: Ivanov, V. Ye. (Corresponding member AN SSSR); Nechyporenko, Ye. P. (Dr. of Technical Sciences); Oel'pov, A. D.; Matyushenko, N. N.

ORG: none

TITLE: Siliconizing of molybdenum in vacuum with a controlled rate of silica delivery

SOURCE: Seminar po zharostoykim pokryt'iyam. Leningrad, 1964. Zharostoykiye pokrytiya (Heat-resistant coatings); trudy seminarov, Leningrad, Izd-vo Nauka, 1965, 83-86

TOPIC TAGS: vapor plating, silica, molybdenum, crystal structure

ABSTRACT: An experiment was conducted to siliconize Mo under a controlled delivery rate so that the amount of SiO_2 deposited on the sample surface was nearly similar to the amount necessary for the formation of a diffusion layer at a given temperature. This resulted in the formation of the silicide layers at temperatures above the eutectic, with the rate controlled only by diffusion. Siliconizing was done

Card 1/3

L 26409-66

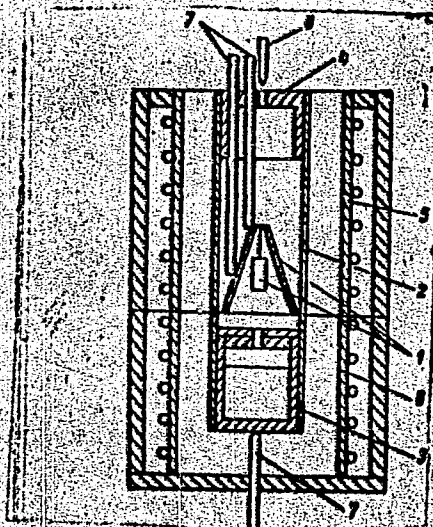
ACC NR: AT5027943

in a special apparatus (see Fig.) where sample 1 was set into container 2 having in its lower part the crucible 3 containing SiO_2 . The container was closed by lead 4, charged into vacuum chamber and exposed to a vacuum of 10^{-5} mm Hg. The container was then closed by rod 8 and heated to the required temperature by resistance heaters 5 and 6 controlled by Pt-PtRh thermocouple 7. The rate of silica delivery, commensurable with the diffusion at a given temperature, was regulated by the selection of openings in the crucible and the container and by changing the temperature in the SiO_2 . The microphotograph of the layer produced at 1500°C showed that it consisted of a single phase which was determined by X-ray diffraction analysis as MoSi_2 . Therefore, the use of a controlled rate of delivery of SiO_2 during siliconizing from the vapor phase permitted the authors to increase the temperature of siliconizing above the eutectic and to increase the rate of growth and the thickness of the layer. The changes in temperature of the production of the silicide layer insignificantly affected the temperature of the beginning of cracking in the coating. Orig. art. has: 3 fig. and 1 table.

Card 2/3

T 28109-66

ACC NR: AT5027943



SUB CODE: 14,11/ SUBM DATE : 20Jul65/ ORIG REF: 003

Card 3/3 *LC*

1 9441-66 EWT(m)/EWP(k)/EWP(z)/EWP(b)/EWP(e)/EWP(t) IJP(e) JJP/JG/AD
 ACC NR: AP5027137 SOURCE CODE: UR/0126/55/020/004/0531/0534

AUTHOR: Nechiporenko, Ye. P.; Yefimenko, L. N.; Matyushenko, N. N.; Verkhorobin,
 L. F. ^{44,55} ^{44,55} ^{44,55}

ORG: Physicotechnical Institute, AN UkrSSR (Fiziko-tehnicheskii institut AN UkrSSR)
^{44,55}

TITLE: On disintegration of tungsten disilicide with oxidation in air

SOURCE: Fizika metallov i metallovedeniye, v. 20, no. 4, 1965, 531-534

TOPIC TAGS: tungsten, tungsten disilicide, metal oxidation
^{44,55} ²¹ ²¹

ABSTRACT: Specimens of tungsten disilicide prepared from 99.9%-pure tungsten and silicon powders, either by hot compacting at 1700C, by cold compacting and sintering in an argon atmosphere at 1000C for 1 hr, or by siliconizing of tungsten in a vacuum of 10^{-5} mm Hg at 1250C had a porosity of 3, 40, or 0%, respectively. All specimens were tested for oxidation behavior in air at 600-1100C. Hot compacted, and cold compacted and sintered specimens gradually disintegrated into yellow powder at 700-1000C. On specimens obtained by vacuum-siliconizing, an oxide layer was formed which prevented the disintegration of the specimens. These results showed that the oxidation failure of homogeneous WSi_2 was not a specific property of the material but was caused by macrodefects (pores). In all cases, disintegration occurred in the temperature range where the oxidation products are not volatile. The oxidation behavior of poreless WSi_2 indicated that disintegration of porous WSi_2 specimens is as-

UDC: 669.15.018.85

Cord 1/2

L 9441-66

ACC NR: AP5027137

sociated with the accumulation of oxidation products and the accompanying increase in volume. Orig. art. has: 3 figures. [MS]

SUB CODE: 11/ SUBM DATE: 20Oct64/ ORIG REF: 003/ OTH REF: 007/ ATD PRESS:

4154

L 23586-66 EWT(m)/EWP(e)/ETC(f)/EWG(m) JD/JG/AT/WH

ACC NR: AP6012773

SOURCE CODE: UR/0226/66/000/004/0061/0064

AUTHOR: Matyushenko, N. N.; Rozen, A. A.; Pugachev, N. S. 75ORG: Kharkov Physicotechnical Institute, AN UkrSSR (Khar'kovskiy fiziko-tekhnicheskii institut AN USSR) BTITLE: Triangulation of the system C-Si-BeSOURCE: Poroshkovaya metallurgiya, no. 4, 1966, 61-64 27 27 27

TOPIC TAGS: silicon carbide, ternary system, carborundum, beryllium

ABSTRACT: The ternary system C-Si-Be is triangulated by studying the interaction between carborundum and beryllium. The interaction product is a mixture of silicon and beryllium carbide (CBe_2). The polythermal sections Si- CBe_2 and CBe_2 -SiC are quasibinary systems. There is no liquid eutectic in system Si- CBe_2 close to 1400C. Orig. art. has: 3 figures and 2 tables. [Based on author's abstract] [AM]

SUB CODE: 07, 11/ SUBM DATE: 22Jun65/ ORIG REF: 007/ OTH REF: 002/-

Card 1/1 28 2

ACC NR: AP6035097

SOURCE CODE: UR/0032/66/032/009/1084/1085

AUTHOR: Karev, V. N.; Matyushenko, N. N.

ORG: Physics Engineering Institute, Academy of Sciences UkrSSR (Fiziko-tekhnicheskiy institut Akademii nauk UkrSSR)

TITLE: X ray absorption analysis of beryllium and rhodium alloys

SOURCE: Zavodskaya laboratoriya, v. 32, no. 9, 1966, 1084-1085

TOPIC TAGS: beryllium alloy, rhodium alloy, x ray analysis, structural diagram

ABSTRACT: The rhodium-beryllium system has not been studied at the present time. The method of determining alloy structure should be known in order to study the structure of the crystal phases and the constitutional diagram. The alloys were prepared under vacuum at 100--1400 C with Rh concentrations of 14 to 90 wt. % and in most cases were heterogeneous with unknown phase structure. Their composition was determined by x-ray absorption analysis and volumetric measurement of the same alloys by the microportion method. The difference in determining rhodium content by these two methods was no more than $\pm 5\%$. Orig. art. has: 2 formulas and 1 table.

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 004

Card 1/1

CX MATYUSHENKO, P. S.

24

Selection of density for gravity separation in coal benefici-
ation. P. S. Matyushenko. (Sov. 8, 1070-4(1948)).
The d. at which coal should be beneficiated should be such
that the losses of org. matter in the tailings are balanced
by advantages gained in using the concentrate. The line
of division between concentrate and tailings depends not
only on the nature of impurities in the coal (mineral matter,
S, H₂O) but equally on the use of the beneficiated coal
(metallurgical coke, locomotive fuel, stationary boiler fuel,
etc.). Formulas are derived which take these points in
consideration. M. Hosh

S/279/63/000/001/006/023
E193/E383

AUTHORS: Alekseyeva, F.N., Matyushenko, R.S., Rakovskiy, V.S.,
Silayev, A.F. (Moscow)

TITLE: The role of distortions of the second type in the
recrystallization process during sintering of
refractory-metal powder compacts

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye
tekhnicheskikh nauk. Metallurgiya i gornoye delo.
no. 1, 1963, 97 - 99

TEXT: X-ray diffraction measurements and metallographic
examination were conducted on cylindrical specimens (10 mm in
diameter, 15 mm high), compacted from niobium, tungsten and
molybdenum powders under pressures of 1 000 - 8 000 kg/cm² and
sintered for various periods at 1900 - 2100 °C. The results are
reproduced in the form of graphs showing the grain size of the
sintered compacts as a function of the compacting pressure and
sintering time and temperature. A typical diagram constructed for
tungsten compacts is shown in Fig. 2, where the grain size (d, μ)
is plotted against the compacting pressure ($P, \text{kg/mm}^2$)

Card 1/3

S/279/63/000/001/006/023
E193/E383

The role of ...

Abstracter's note: this is probably a mistake and the pressure should read " kg/cm^2 ". and sintering temperature ($t, ^\circ\text{C}$). Conclusions: 1) The relationship between the compacting pressure and the resultant microstresses of the second type, set up in niobium, tungsten and molybdenum powders, is similar for all these three metals. 2) Increasing the magnitude of microstresses of the second type increases the thermodynamic instability of the metal and creates conditions favourable for grain growth during sintering. 3) The intensity of growth of recrystallized grains of the metals studied depends on the magnitude of microstresses of the second type and on the sintering conditions. 4) The most intensive growth of recrystallized grains takes place in specimens compacted under pressures of $5000 - 6000 \text{ kg/cm}^2$; further increase in the compacting pressure brings about a decrease in the final grain size of the sintered material. 5) Controlling the grain size of sintered parts provides a means for increasing their resistance to creep. There are 3 figures.

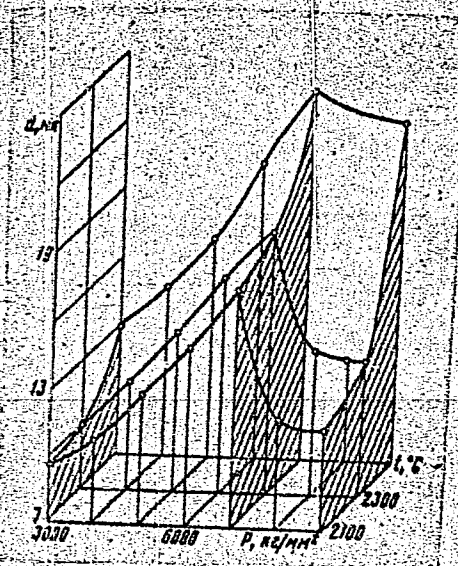
SUBMITTED: June 23, 1962

Card 2/3

The role of

Fig. 2:

S/279/63/000/001/006/023
E193/E383



Card 5/3

ALEKSEYEVA, F.N. (Moskva); MATYUSHENKO, R.S. (Moskva); RAKOVSKIY, V.S.
(Moskva); SILAYEV, R.F. (Moskva)

Process of compacting high-melting metal powders during pressing.
Izv. AN SSSR. Otd. tekhn. nauk. Met. i gor. delo no.2:100-103
Mr-Ap '63. (MIRA 16:10)

ALEKSEYEVA, F.N. (Moskva); MATYUSHENKO, R.S. (Moskva); RAKOVSKIY, V.S. (Moskva);
SILAYEV, A.F. (Moskva)

Effect of technological conditions on the density and strength
of sintered high melting alloys. Porosh.met. 4 no.4:33-36 J1-Ag
'64. (MIRA 18:8)

ALEXSEYEVA, F.N. (Moskva); MATTUSHENKO, R.S. (Moskva); RAKOVSKIY, V.S. (Moskva);
SILAYEV, A.F. (Moskva)

Role of second-order distortions in compaction processes during
pressing and recrystallization in the sintering of high-melting
metals. Porosh.met. 4 no.5:1-8 S-0 '64.

(MIRA 18:10)

MATYUSHENKO, V.I. (Angarsk)

Nonfreezing water post. Vod. i san. tekhn. no.8:34-35

Ag '62.

(MIRA 15:9)

(Pumping machinery)

IEKHANOV, N. M.; BOYTSOV, L. I., kand. tekhn. nauk; KRAYCHENKO, V. A.,
kand. tekhn. nauk; SNEZHKO, P. F.; ZEL'DIN, V. S.; KHARLAMOV, I. G.
[deceased]; RUNOV, M. A.; SEREBRENNIKOV, A. A.; MATYUSHENKO, V. I.

Production of high-quality ferrosilicon powder for heavy
suspensions. Met. i gornorud. prom. no. 4:14-16 JI-Ag '65.
(MIRA 18:10)

5:2600,5.4130

77095
SOV/62-59-12-39/43

AUTHOR: Matyushenko, V. Kh.
TITLE: Adsorptive-Kinetic Method of Determining Bond Energies.
Brief Communication
PERIODICAL: Izvestiya Akademii naukSSSR. Otdeleniye khimicheskikh
nauk, 1959, Nr 12, pp 2253-2255 (USSR)
ABSTRACT: Balandin's kinetic method of determining bond energies
in an activated catalytic complex (Zh. obshch. khimii,
1946, Vol 16, p 793) assumes that several (2-3) reac-
tions are catalyzed by a single active center. In
the method suggested by the author, it suffices for
only one catalytic reaction to take place between
the organic molecule atoms and the surface atoms of
the catalyst. According to the multiple adsorption
theory, the energy of activation of activation of
alcohol dehydrogenation can be expressed as an alge-
braic sum of the energies of bondbraking and bond-
making in the activated complex (see Eq. 1), where Q
is the energy required for the full dissociation

Card 1/5

Adsorptive-Kinetic Method of Determining
Bond Energies. Brief Communication

77095
SOV/62-59-12-39/43

of bond i ; constant γ takes into account the delay between the beginning of the reaction and the full dissociation of the bond, and expresses the degree of bond deformation. It was found (A. A. Balandin,

$$-e = \sum_i \gamma_i Q_i, \quad (1)$$

op. cit.) that γ can be factored out of the summation sign, and it can be assumed that its value is equal to 0.75 (see Eq. 2).

$$\gamma \approx 3/4. \quad (2)$$

Eq. (1) for alcohol dehydrogenation can be written, therefore, in the form of Eq. (3).

$$-e = -\gamma Q_{C-H} - \gamma Q_{O-H} + 2\gamma Q_{H-K} + \gamma Q_{C-K} + \gamma Q_{O-K}. \quad (3)$$

The heat of formation of the precatalytic adsorption complex can be expressed, similarly to Eq. (1), in the form of Eq. (4).

$$\lambda = \sum_i \alpha_i Q_i. \quad (4)$$

Values of γ_i and α_i in Eqs. (1) and (4) differ only slightly, since the difference between the adsorption

Card 2/5

Adsorptive-Kinetic Method of Determining
Bond Energies. Brief Communication

77095
SOV/62-59-12-39/43

and the catalytic complexes formed on the same active center must be insignificant. It was assumed further that the reacting atoms in the organic molecule of these complexes form bonds of approximately equal strength with the surface atoms of the catalyst; this can be expressed by Eq. (5).

$$\gamma_{x-k} = \alpha_{x-k} \approx 0,75, \quad (5)$$

However, in order to differentiate between these complexes, the coefficients α_1 must be kept in front of the terms expressing the bond dissociation energy, but it can be given a mean value α . The heats of adsorption of alcohol (λ_1), aldehyde or ketone (λ_2), and hydrogen (λ_3) are then expressed by Eqs. (6) to

$$(8). \quad \lambda_1 = -\alpha Q_{C-H} - \alpha Q_{O-H} + 2\gamma Q_{H-K} + \gamma Q_{C-K} + \gamma Q_{O-K}. \quad (6)$$

$$\lambda_2 = -\alpha Q_{C=O} + \gamma Q_{O-K} + \gamma Q_{C-K}. \quad (7)$$

$$\lambda_3 = -\alpha H_{H-H} + 2\gamma Q_{H-K}. \quad (8)$$

Card 3/5

If values of λ_1 are known, the values of α and

Adsorptive-Kinetic Method of Determining
Bond Energies. Brief Communication

77095

SOV/62-59-12-39/43

Q_{x-k} can be determined from Eqs. (2), (3), (6), (7), and (8). Contemporary methods (A. A. Balandin, Vestn. Mosk. univ., 1957, Nr 4, p 137) allow for the determination of the difference $\lambda_1 - \lambda_1 = \lambda_{11}$. By subtracting Eq. (6) from Eqs. (7) and (8), we obtain Eqs. (9) and (10), and by adding Eqs. (8), (9), and (10) we get Eq. (11), from which α can be determined.

$$\Delta\lambda_{11} = \alpha(Q_{C-H} + Q_{O-H} - Q_{C=O}) - 2\gamma Q_{H-K}. \quad (9)$$

$$\Delta\lambda_{11} = \alpha(Q_{C-H} + Q_{O-H} - Q_{H-H}) - \gamma R_{C-K} - \gamma Q_{O-K}. \quad (10)$$

$$\Delta\lambda_{11} + \Delta\lambda_{11} - s = \alpha(2Q_{C-H} + 2Q_{O-H} - Q_{C=O} - Q_{H-H}) - \gamma(Q_{C-H} + Q_{O-H}) \quad (11)$$

The value of Q_{H-K} can be then determined from Eq. (9) of from Eqs. (3) and (10). Values of Q_{C-K} and Q_{O-K} can be determined after additional investigation of the process of displacement of alcohol molecules from the active centers by water or other compound of similar structure (see Eq. 12), and this latter equation, in conjunction with Eq. (3) or (9), allows for the

Card 4/5

Adsorptive-Kinetic Method of Determining
Bond Energies. Brief Communication

77095
SOV/62-59-12-39/43

determination of the above values.

$$\Delta\lambda_{11} = \alpha Q_{C-H} - \gamma Q_{H-K} - \gamma Q_{C-K}. \quad (12).$$

The numerical values obtained by the above method in the dehydrogenation of isopropanol over Ni, Pt, Co, Cu, Ag, Fe, MnO, and ZnO were close to those obtained by the kinetic method. Analogous investigation was made, and similar results were obtained previously by S. L. Kiperman, whose report will be published in the Journal of Physical Chemistry (Zhurnal fizicheskoy khimii). There is 1 table; and 4 Soviet references.

ASSOCIATION: N. D. Zelinskiy Institute of Organic Chemistry,
Academy of Sciences, USSR (Institut organicheskoy
khimii imeni N. D. Zelinskogo Akademii nauk SSSR)

SUBMITTED: May 20, 1959

Card 5/5

66185

SOV/20-128-5-39/67

5(4) 5.1190

AUTHOR: Matyushenko, V. Kh.

TITLE: The Theory of Selection of Catalysts and the Bond Energies

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 128, Nr 5, pp 999-1002 (USSR)

ABSTRACT: The author underlines the importance attached to the knowledge of the kind of bond between adsorbed molecule and catalyst as well as to the dependence of the bond on the chemical properties of the element used as catalyst for the selection of the catalyst. He bases his investigation on the relationships detected by L. Pauling and J. Sherman (Ref 2), and deduces equation (3) for the bond

energy Q_{A-A} : $Q_{A-A} = \frac{k_i - k_o}{k_i} L$ (L = energy of sublimation, k_i = the coordination number of atom A inside the catalyst, k_o the same on the catalyst surface). It is assumed that the catalytically active center is a constituent of the crystal lattice found on the catalyst surface which has, unlike the same atom inside the catalyst, a certain free valency. Equation (6) was obtained for ✓

Card 1/3

The Theory of Selection of Catalysts and the
Bond Energies

66185

SOV/20-128-5-39/67

Q_{A-B} . The resultant bond energies between metals and nonmetals

at a definite $f = \frac{k_1 - k_0}{k_1}$ are listed in table 1, the bond

energies between the C-atoms of organic molecules and metal catalysts in table 2. The determination of the sublimation energy was based upon data from the US Nat. Bur. Stand. (Ref 6), and that of the bond energy upon data by V. N. Kondrat'yev (Ref 7).

Electronegativity X of the atoms C=, C_≡, C_{ar}, C_{diene}, ΔC, □C, □C was estimated according to the formula

$X_1 = X_C + \frac{a}{23.06}$ ev, where a = absolute value of the difference between the actual heat of formation and that calculated additively from bond energies. The values of $X_{C=}$ and $X_{C≡}$ are in agreement with data by G. V. Bykov (Ref 9). The data of table 1 indicate the periodic character of the catalytic properties of the elements

Card 2/3

4

66185

The Theory of Selection of Catalysts and the
Bond Energies

SOV/20-128-5-39/67

and the dependence of the properties on the physical state of the surface (variation of f has strong effects on the value of Q_{A-B}).

An article by S. L. Kiperman and A. A. Balandin presents data on the bond energies of organic molecules at the surface of Ni-, Fe-, Pt-, and Pd-catalysts which are in good agreement with the data listed in tables 1 and 2. The article has recently been sent to the press and will be published in the periodical "Zhurnal fizicheskoy khimii" (Journal of Physical Chemistry). There are 2 tables and 9 references, 4 of which are Soviet.

PRESENTED: May 23, 1959 by A. A. Balandin, Academician

SUBMITTED: May 12, 1959

Card 3/3

TOLSTOPIATOVA, A.A.; BALANDIN, A.A.; MATYUSHENKO, V.Kh.

Dehydrogenation of alcohols and cyclohexene on MnO . Izv. AN
SSSR Otd.khim.nauk no.5:787-793 My '60. (MIRA 13:6)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova i
Institut organicheskoy khimii imeni N.D.Zelinskogo Akademii
nauk SSSR.

(Cyclohexene) (Cyclohexanol) (Isopropyl alcohol)

S/062/60/000/008/014/033/XX
B013/B055

AUTHORS: Tolstopyatova, A. A., Balandin, A. A., and Matyushenko,
V. Kh.

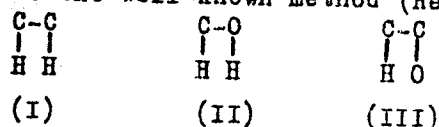
TITLE: Determination of the Bonding Energies of the Atoms of
Organic Molecules Reacting With the MnO Catalyst Surface

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk,
1960, No. 8, pp. 1333-1336

TEXT: The present paper is a continuation of the investigation into the transformation of alcohols on manganous oxide begun in Refs. 1 and 2. The experimental methods and catalyst preparation have been described previously (Ref. 2). Dehydration was carried out between 330° and 380°C. The gaseous products consisted of unsaturated hydrocarbons only. The first series of experiments was performed to determine the apparent activation energy (Table 1, Fig. 1). The activation energy calculated by means of the Arrhenius equation from the relation $\log m = f(1/T)$ was 24.1 kcal/mol. Relative adsorption coefficients of isobutylene (Table 2) and water (Table 3) were determined. The determination of the relative adsorption coefficient was determined. The determination of the relative adsorption coefficient was determined. Card 1/3

Determination of the Bonding Energies of the S/062/60/000/008/014/033/XX
Atoms of Organic Molecules Reacting With the B013/B055
MnO Catalyst Surface

cients and their temperature dependence permitted calculation by the method described in Ref. 5 of the changes in free energy, enthalpy and entropy produced by displacement of trimethylcarbinol from the active centers of the catalyst by isobutylene and water (Table 4). The true activation energy for the dehydration of trimethylcarbinol, calculated from the relation $\log k = f(1/T)$ ($E = 31.0$ kcal/mol) was found to be 6.9 kcal higher than the apparent activation energy ($E' = 24.1$ kcal/mol). On the strength of this investigation, the authors were able to determine the bonding energies of the atoms reacting with the catalyst surface according to the well-known method (Ref. 6). These reactions are:



(I) dehydrogenation of hydrocarbons; (II) dehydrogenation of alcohols; (III) dehydration of alcohols. The following bonding energies were found:
 $Q_{\text{H-k}} = 50.75$, $Q_{\text{C-k}} = 26.7$ and $Q_{\text{O-k}} = 38.8$. V. N. Kondrat'yev is mentioned.

Card 2/3

Determination of the Bonding Energies of the S/062/60/000/008/014/033/XX
Atoms of Organic Molecules Reacting With the B013/B055
MnO Catalyst Surface

There are 1 figure, 4 tables, and 8 Soviet references.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
(Moscow State University imeni M. V. Lomonosov).
Institut organicheskoy khimii im. N. D. Zelinskogo Akademii
nauk SSSR (Institute of Organic Chemistry imeni N. D.
Zelinskiy of the Academy of Sciences USSR) ✓

SUBMITTED: January 14, 1959

Card 3/3

TOLSTOPYATOVA, A.A.; BALANDIN, A.A.; MATYUSHENKO, V.Kh.; PETROV, Yu.I.

Kinetics of the dehydrogenation and dehydration of alcohols, and of the dehydrogenation of hydrocarbons over WS_2 and MoS_2 catalysts. Izv. AN SSSR Otd.khim.nauk no.4:583-590 Ap '61. (MIRA 14:4)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Dehydrogenation) (Dehydration (Chemistry))
(Molybdenum sulfide) (Tungsten sulfide)

BALANDIN, A.A.; MATIUSHENKO, V.Kh.

Kinetic correlations in the dehydrogenation of compounds with six-membered rings. Part 2. Zhur.fiz.khim. 37 no.1:115-124 Ja '63.

Kinetic correlations in the dehydrogenation of six-membered rings.
Part 1. 125-131 (MIRA 17:3)

1. Institut organicheskoy khimii imeni Zelinskogo AN SSSR.

MATYUSHENKO, V. Kh.

Determination of constants in kinetic equations. Zhur. fiz.
khim. 37 no. 3:517-525 Mr '63. (MIRA 17:5)

1. Institut organicheskoy khimii AN SSSR.

GOLOTSYN, S.V.; MATYUSHENKO, V.V.

Semidenart elements in the far southeast of the Central
Chernozem Region. Nauch.zap.Vor.oid.VBO 2a:15-22 '64.
(MIRA 18:11)

BUCHINSKIY, I.Ye.; KOPACHEVSKAYA, M.N.; MATYUSHENKO, Ye.N.

Results of agrometeorological observations during dry winds.
Trudy UkrNIGMI no.29:38-49 '61. (MIRA 15:2)
(Ukraine--Droughts)
(Plants, Effect of aridity on)

BOVA, N.V.; MATYUSHENKO, Ye.N.

Distribution of dry winds in the Ukraine. Trudy UkrNIGMI
no.38:37-42 '63. (MIRA 17:2)

NOR, Aleksandr Alekseyevich; MATYUSHENKO, Yuriy Pavlovich;
MEL'NIKOV, Andrey Alekseyevich; LIPAKOV, Aleksey
Nikandrovich; VIRABOV, A.A., inzh., retsenzent;
BARUZDIN, M.A., inzh., otv. red.

[Engineers of electric mine locomotives] Mashinist rud-
nichnogo elektrovoza. Moskva, Izi-vo "Nedra," 1964. 161 p.
(MIRA 17:4)

AMOSOV, V.I.; MATYUSHENKOV, V.G.

Machine for pinning together basic holders in the slubbing frame.

Biul.tekh.-ekon.inform.Gos.nauch.-issl.inst.nauch.i tekh.inform.

17 no.7:57-59 J1 '64.

(MIRA 17:10)

MATYUSHENSKIY, B.V.; LAZUR'YEVSKIY, G.V.; IVANOV, N.V.

By-products of the essential oil industry as raw materials for
the production of furfurole. Zhur.prikl.khim. 35 no.4:873-876
Ap '62. (MIRA 15:4)

1. Kishinevskiy gosudarstvennyy universitet.
(Furaldehyde) (Oil industries--By-products)

NOVOKHATKA, D.A.; MATYUSHENSKIY, B.V.; TYURINA, M.K.

Reaction of phenol with 2-chloroprene in the presence of Friedel-Crafts catalysts. Zhur. VKHO 10 no.2:240. '65.

(MIRA 18:6)

1. Severodonatskiy filial Gosudarstvennogo nauchno-issledovatel'skogo i proyektного instituta azotnoy promyshlennosti i produktov organicheskogo sinteza.

L 21186-66 EWT(m)/EWP(1)/T RM
 ACC NR: AP6009708 (A) SOURCE CODE: UR/0064/66/000/003/0015/0016
 AUTHOR: Novokhatka, D. A.; Matyushenskiy, B. V.; Glushkova, A. A.; Seraya, V. I.
 ORG: none 19
 TITLE: Preparation of diphenylolpropane from phenol and methylacetylene? 13
 SOURCE: Khimicheskaya promyshlennost', no. 3, 1966, 15-16
 TOPIC TAGS: bisphenol A, bisparahydroxyphenylpropane, diphenylolpropane, polycarbonate, phenol, methylacetylene, boron trifluoride, manganese sulfate
 ABSTRACT: A new preparative method has been developed for high purity 2,2-bis(4-hydroxyphenyl)propane (bisphenol-A), suitable for making polycarbonates. The method is based on the alkylation of phenol with methylacetylene in the presence of boron trifluoride as catalyst. Preliminary study indicated that the yield of bisphenol-A depends on the phenol:methylacetylene molar ratio and on temperature, and that the reaction is promoted by salts of manganese, iron or bismuth taken in small amounts, i.e., 0.04%. Water inhibits the reaction. The optimum conditions are: temperature, 45-50C; phenol:methylacetylene molar ratio, 12:1; BF₃, 2.5%; MnSO₄, 0.04% (both on the phenol). The catalyst can be recovered from the residual phenol in the form of a phenol complex. A flow diagram and description of the process are given in the original. The experiments conducted on a pilot plant indicated that the bisphenol-A yield is 89%, if 90% methylacetylene is used; the yield can be increased to 93-95%
 Card 1/2 UDC: 547.631.4'211.07:542.973:546.273'161

L 21186-66

ACC NR: AP6009708

(on phenol reacted), if 99% methylacetylene is used. The cost per ton of bisphenol-A is calculated to be 8.2% lower than that produced by the hydrochloric acid method. Orig. art. has: 1 figure and 1 table. [B]

SUB CODE: 07, 11/ SUBM DATE: none/ ORIG REF: 003/ ATD PRESS: 1/222

cont 2/2 (X)

28819

10.6000 1327

S/147/61/000/003/009/017
E081/E135

AUTHOR: Matyushev, Yu.S.

TITLE: Calculations of the strength of a conical shell of
the type of a wing of small length

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy,
Aviatsionnaya tekhnika, 1961, No.3, pp. 89-99

TEXT: An analysis of the stresses in a constant-thickness,
tapered, thin shell with the shape of a low-aspect-ratio wing is
presented. Equations are derived on the basis of deformations
with the use of Vlasov's variation method under the assumption
that the distribution of stresses along the thickness of the
shell is uniform. The geometrical relationships between the
strains and the displacements, and the form of Hooke's law
appropriate to the shell are given and lead to the equations
connecting the stresses and displacements. The equations for the
potential energy of the internal and external forces are also
stated. Following V.Z. Vlasov, the displacements are written as
the sum of a series of generalised displacement functions, and the
forces are expressed in terms of these functions. The method is
Card 1/2

28819

Calculations of the strength of a S/147/61/000/003/009/017
E081/E135

illustrated by considering a one-cell tapered shell, loaded by a force Q_0 at the free end (Fig.2). This shell is analysed mathematically in terms of the general theory developed earlier, and for a numerical example, a shell having $H = 0.1L$, $B = 2L$ ($B_1 = 0$, $B_2 = 2L$), $\delta_1 = \delta_2 = 0.005L$, $l = 0.2L$ (Fig.2) is considered. Formulae are obtained for the stresses, and a map is reproduced of the normal stress distribution in the covering near the front and rear walls. There are 4 figures and 4 Soviet references.

ASSOCIATION: Kafedra stroitel'noy mekhaniki, Moskovskiy
aviatsionnyy institut
(Department of Structural Mechanics, Moscow Aviation
Institute)

SUBMITTED: February 11, 1961

Card 2/3

PERLOVA, R. I.; MATVICHENKOVA, Y. I.

Potatoes

Experimental cultivation of several varieties of potatoes in the Main Botanical Garden.
Biul. Glav. bot. sada, No. 10, 1951.

9. Monthly List of Russian Accessions, Library of Congress, December 195¹/₂, Uncl.

MATYSHEVSKAYA, M.S. [Matyshevs'ka, M.S.]

Toxin formation by phytopathogenic bacteria. Mikrobiol. zhur.
24 no.6:57-63 '62 (MIRA 17:5)

1. Institut mikrobiologii AN UkrSSR.

MATYUSHICHEV, I. A.

GEMBITSKIY, Ye. V., kandidat meditsinskikh nauk, podpolkovnik meditsinskoy sluzhby; MATYUSHICHEV, I. A., mayor meditsinskoy sluzhby

Spontaneous pneumothorax of nontuberculous etiology. Voen.-med.
zhur. no. 10:52-54 0 '56. (MIRA 10:3)
(PNEUMOTHORAX)

VASIL'YEV, A. (Moskva); MATYUSHIN, A. (Moskva); MARCHENKOV, L. (Voronezh);
AGAFONOV, V. (Krasnodarskiy kray); SMELOV, M. (Moskva); KRAMER, A.
(Leningrad); RETSENS, L.; KAYROD, V.; YEFREMENKOV, M. (Moskovskaya
obl.)

Suggestions of the readers. Radio no.8:46 Ag '62. (MIRA 15:8)
(Radio--Equipment and supplies)

MATYUSHIN, A.M. (Moskva)

Investigation of psychological features of the process of analysis.
Vop.psikhol. 6 no.3:46-56 My-Je '60. (MIRA 14:5)
(Thought and thinking)

L 45908-66 ENT(m)/EWP(t)/FTI IJP(c) JD/WB
 ACC NR: AR6015978 SOURCE CODE: UR/0275/65/000/011/V014/V015

AUTHOR: Matyushin, A. F.

TITLE: Use of ultrasound for intensifying electrochemical processes

SOURCE: Ref. zh. Elektronika i yeye primeneniye, Abs. 11V96

REF SOURCE: Tr. N.-i. tekhnol. in-t, vyp. 8, 1964, 71-83

TOPIC TAGS: ultrasonic machining, electrochemistry, electroerosion machining, metal deposition

ABSTRACT: The author considers the effect of ultrasound on processes of electrochemical metal deposition. It is conjectured that metal deposition is accelerated by cavitation destruction of the oxide film, mixing of the electrolyte under the effect of the "sonic wind", and elimination of hydrogen polarization during ultrasonic degassing. The effect of each factor is considered separately. Data are given from investigations of the effect of ultrasound on nickel, silver and zinc plating and on cyanogen and acid copper plating. A finer grain coating is produced, the porosity of the deposition is sharply reduced, corrosion resistance is increased for thinner coatings and depositions may be produced with provision of a vacuum of up to 10^{-5} mm Hg. Working conditions and compositions are given for plating with copper, nickel, silver, zinc, brass, etc. The advantages of using ultrasound for each of these processes are pointed out. 7 illustrations, bibliography of 1 title. A. Ch.
 [Translation of abstract]

SUB CODE: 11, 13
 Card 1/1 mjs

UDC: 681.888:66

characteristic of an amplifier

SOURCE: Radiotekhnika, v. 20, no. 4, 1965, 45-49

TOPIC TAGS: amplifier, electron tube amplifier, rf amplifier, amplitude frequency characteristic, amplitude correction

ABSTRACT: As an autotransformer-type 4th and 5th order correction circuit based on the "smooth approximation" method suggested by F. A. Müller (PIRE, v. 42, no. 8, 1954) is difficult to materialize (because of the high coupling coefficient required), this article proposes the "Chebyshev approximation" which

1 47069-65
ACCESSION NO: AP5010381

determining the coefficients in the equation for the frequency-distortion modulus by a trial-and-error method. In preliminary experiments, with a 4th order correction, a frequency band of 100 Mc was obtained (gain, 40 db; irregularity, 11 db) which amounted to about 90% of the theoretical limit. It is believed that, with a permissible irregularity of 1.5 db, the full theoretically possible frequency band can be materialized; with an irregularity of 1 db, the band is narrower but is still 30-40% wider than that obtainable from the "smooth approximation" method.

L 24846-66 EWT(1)/EWT(m) IJP(c)

ACC NR: AP6007813

SOURCE CODE: UR/0120/66/000/001/0380/0083

AUTHOR: Gus'kov, B. N.; Matyushin, A. T.; Matyushin, V. T.

ORG: Joint Institute of Nuclear Research, Dubna (Ob'yedinennyi institut yadernykh issledovaniy)

TITLE: Series power supply for the gaps in a spark chamber

SOURCE: Priboi i tekhnika eksperimenta, no. 1, 1966, 80-83

TOPIC TAGS: spark gap, spark chamber, power supply, particle track

ABSTRACT: The authors compare the operation of series-fed and parallel-fed spark chambers. A multigap neon chamber was used in the experiment. The basic parameters of the chamber with both types of power supply are given and the experimental method is briefly outlined together with an explanation of the formulas used for calculating "chamber efficiency". This term is defined as

$$\eta = \frac{1}{n} \sum_{i=1}^n \eta_i = \frac{1}{nN} \sum_{i=1}^n k_i$$

where η_i is the registration efficiency of a gap, N is the number of particle transits, and k_i is the number of ignitions of the i -th gap. The registration efficiency of a

UDC: 539.1.073

Cont 1/2

L 24845-66

ACC NR: AP6007813

single spark gap is the ratio of the number of ignitions to the number of particle transits. It was found that the chamber efficiency in the case of series connected spark gaps is higher than that of a parallel-fed chamber when the supply voltages are identical. The increase in efficiency when the supply voltage is raised and the reduction in frequency as related to the pulse delay is steeper for the series power supply. The memory time of the chamber for both types of connection is approximately identical both with and without a clearing field. The tracks of the sparks are thinner and more uniform with series gap connection due to the fact that the current is the same for all gaps. No special measurements were made of the chamber efficiency for the case of simultaneous registration of several particles. However, it is pointed out that several particles were registered simultaneously at a comparatively low electric field strength in the gap in the case of a series-connected power supply. The multi-track efficiency of the chamber may be improved by increasing the duration or amplitude of the high-voltage pulse. Orig. art. has: 8 figures, 2 formulas.

SUB CODE: 18/

SUBM DATE: 15Jan65/

ORIG REF: 002/

OTH REF: 001

Card 2/2 dha

ACC NR: AP6034221

SOURCE CODE: UR/0120/66/000/005/0075/0078

AUTHOR: Matyushin, A. T.; Matyushin, V. T.

ORG: Joint Nuclear Research Institute, Dubna (Ob'yedinennyy institut yadernykh issledovaniy)

TITLE: A symmetric system of wire electrodes in an isotropic spark chamber

SOURCE: Priory i tekhnika eksperimenta, no. 5, 1966, 75-78

TOPIC TAGS: spark chamber, cosmic ray particle, wire electrode

ABSTRACT: The tracks of charged particles moving at arbitrary angles to the direction of the electric field can be recorded in an isotropic spark chamber with a symmetric system of wire electrodes. To obtain the streamer conditions of operation, high-voltage pulses with a steep leading edge and of controlled duration and amplitude are applied to the wire electrodes. Both the impedance of the electrodes and the possibility of optimizing the structure of the spark chamber are analyzed. A special spark chamber was constructed to test the efficiency of the wire electrodes. It has the following parameters: $a = 1.2$ mm, $r_0 = 0.05$ mm, $D = 300$ mm, where a is the space between the electrodes, r_0 is the radius of the wires, and D is the discharge gap. The chamber was tested with cosmic ray particles. It was found that a symmetric system of electrodes is capable of operation in an isotropic spark chamber; coronas were not observed on the wire electrodes when voltage pulses of up to $E_0 = 70-80$

Card 1/2

UDC: 539.1.05

ACC NR: AP6034221

kv/cm were applied. Coordinates of the particle tracks, especially of the "z-projection", were determined with high accuracy. It is indicated that in some cases an isotropic chamber consisting of two or three equal symmetric gaps can be more advantageous. The difference in the luminosity of the particle tracks was not strongly expressed. This is attributed to the influence of the shape of electrodes. Orig. art. has: 5 formulas and 3 figures.

SUB CODE: 14,20/ SUBM DATE: 07Aug65/ ORIG REF: 008/ OTH REF: 005

Card 2/2

MATYUSHIN, I. F.

MATYUSHIN, I. F.: "Acute intestinal impassability, based on material from the hospitals in the city of Nizhniy Tagil". Sverdlovsk, 1955. Sverdlovsk State Medical Inst.

(Dissertation for the Degree of Candidate of Medical Sciences)

SO: Knizhnaya Letopis' No.51, 10 December 1955

MATYUSHIN, I.F.

Plastic substitution of the walls of the right atrium. Ekaper.
khir. i anest. 8 no.3:22-25 My-Je'63 (MIRA 17:1)

1. Iz kafedry operativsnoy khirurgii i topograficheskoy ana-
tomii (zav. - prof. B.V. Parin) Gor'kovskogo meditsinskogo
instituta imeni S.M. Kirova.

MATYUSHIN, I.F.

Results of experimental studies on the resection and replacement of the auricular walls. Uch. trudy GMI no.19:273-283 '65.

(MIRA 18:8)

1. Iz kafedry operativnoy khirurgii Gor'kovskogo gosudarstvennogo meditsinskogo instituta imeni S.M.Kirova.

MATYUSHIN, I.F.; YASKORSKIY, A.A.

Surgical treatment of a heart block utilizing the auricular
appendage as the conductor of the cardiac impulses in an experi-
ment; a preliminary Report. Uch. trudy GMI no.19:300-302 '65.

(MIRA 28:8)

1. Iz kafedry operativnoy khirurgii Gor'kovskogo gosudarstvennogo
meditsinskogo instituta imeni S.M.Kirova.

MYKHAYDAROV, A.Kb., starshiy inzh.; MATYUSHIN, I.N., inzh.

Circuit for the prevention of the discharge operation of dischargers
in block system lines. Avtom., telem.i svyaz' 6 no.2:43 F '62.
(MIRA 15:3)

1. Laboratoriya signalizatsii i svyazi Kuybyshevskoy dorogi.
(Railroads---Signaling)

MATYUSHIN, I.P.

Device for unloading logs from gondola cars. Avtom., telem. i
svyaz' no.6:31 Je '57. (MIRA 10:7)

1. Nachal'nik Daugavpils'koy distantsii signalizatsii i svyazi
Latviyskoy dorogi.

(Loading and unloading)

MATYUSHIN, I.P.

New design of a winding device. Avtom., telemek. i svyaz' 4 no.3:
30 Mr '60. (MIRA 13:7)

1. Nachal'nik Daugavpils'koy dstantsii signalizatsii i svyazi
Latviyskoy dorogi.
(Electric lines--Overhead)

L 42140-66

ACC NR: AP6027622

specimens, compared to 7.8—7.2 kg/mm² and 6.8—6.3 kg/mm² for chemically pickled specimens. Orig. art. has: 3 figures and 1 table. [AZ]

SUB CODE: 13/ SUBM DATE: 12Jun65/ ORIG REF: 003/ ATD PRESS: 5062

Card 2/21112P

MATYUSHIN, M.V., inzhener.

"Operating overhead electric transmission lines." Reviewed by M.V. Matyushin. *Elek.sta.* 24 no.4:63-64 Ap '53. (MLRA 6:5)

(Electric lines--Overhead)

MATYUSHIN, M.V.

Subject : USSR/Electricity AID P - 1509
Card 1/1 Pub. 26 - 5/36
Authors : Bugrinov, Ye. A., Eng., Matyushin, M. V., Eng. and
Nazarov, V. N., Eng.
Title : Design of 110-kv indoor switching substation (Discussion
of an article by L. I. Dvoskin in Elek. sta., 1954, No.1)
Periodical : Elek. sta., 3, 18-21, Mr 1955
Abstract : The authors discuss the details of 110 kv indoor
switching substation designed by L. I. Dvoskin. They
attempt to prove the superiority of outdoor substation.
They also criticize some of the technical solutions
proposed by L. I. Dvoskin.
Institution: None
Submitted : No date

MATYUSHIN, M.V.

KLEMENT'YEV, D.P., inzh.; MATYUSHIN, M.V., inzh.

Centralized repair of equipment of system substations. Elek.sta.
29 no.3:68-72 Mr '58. (MIRA 11:5)
(Electric substations--Maintenance and repair)

BUGRINOV, Ye.A., inzh.; MATYUSHIN, M.V., inzh.

News in the design of substations. Elek. sts. 29 no.10:42-46 0 '58.
(Electric substations) (MIRA 11:11)

VASIL'YEV, Arkadiy Aleksandrovich; SIMCHATOV, Nikolay Petrovich;
MATYUSHIN, M.V., red.; LARIONOV, G.Ye., tekhn.red.

[Strengthening of oil-filled 6-220 kv. switches] Usilenie
maslianykh vykliuchatelei 6-220 kv. Moskva, Gosenergo-
izdat, 1963. 63 p. (Biblioteka elektromontera, no.113)
(MIRA 17:3)

MATYUSHIN, M.V.

Installation of transformer on a mast-type substation. Energetik. 13
no.7:42 JI '65. (MIRA 18:8)

1. Nachal'nik sluzhby setey Moskovskogo rayonnogo upravleniya
energeticheskogo khozyaystva.

MATYUSHIN, M.V.

Letters to readers. Energetik 13 no. 12:23 D '65
(MIRA 19:1)

1. Nachal'nik sluzhby setey Moskovskogo rayonnogo upravleniya
energeticheskogo khozyaystva.

MATYUSHIN, M.V.

Accounting for power line entrance repairs. Energetik 14 no.1:
43 Ja '66. (MIRA 19:1)

1. Nachal'nik sluzhby setey Moskovskogo rayonnogo upravleniya
energeticheskogo khozyaystva.

MATYUSHINA, N.V.

History of standardization in the iron and steel industry.
Standartizatsiia 29 no.9:12-14 S '65.

(MIRA 18:12)

MATYUSHIN, P.

Incoming grain has been processed for long storage. Muk.-elev.prom.
20 no.10:30 0 '54. (MLRA 7:12)

1. Mukhtolovskiy punkt Zagotserno.
(Grain--Storage)

MATYUSHIN, P., starshina sverkhsekretnoy sluzhby

Attack through the snow! Starsh.-serzh. no.2:18-19 F '62.
(MIRA 15:4)

(Attack and defense (Military science))

MATYUSHIN, P.A.

Collection of the most important documents of the Communist Party
and the Soviet government regarding railroad transportation
("Railroad transportation of the U.S.S.R. in documents of the
Communist Party and the Soviet Government." Reviewed by P.A.
Matiushin). Zhel. dor. transp. 40 no.9:93-96 S '58.
(Railroads) (MIRA 11:10)

MATYUSHIN, P.I.
MATYUSHIN, P.I.

~~More efficient use of the BEP-3 machine. Torf.prom. 34 no.8:31~~
'57. (MIRA 11:1)

1.Direktor Algasovskogo predpriyatiya.
(Peat machinery)

BERKOVICH, M.Ya.; MATYUSHIN, P.N.; KOENONOGOV, A.I.

Cooling of bits in the air drilling of wells. Burenie no.413-4.
'65. (MIRA 1965)

1. Ufimskiy neftyanoy institut.

ACC NR: AP6035714 (AN) SOURCE CODE: UR/0413/66/000/019/0061/0061

INVENTOR: Berkovich, M. Ya.; Gulerman, V. S.; Levinson, L. M.; Matyushin, P. N.; Popov, V. A.

ORG: none

TITLE: UM-1 lubricating grease. Class 23, No. 186598

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 19, 1966, 61

TOPIC TAGS: lubricant, low temperature lubricant, antioxidant additive, diphenylamine, grease/UM-1 grease

ABSTRACT: An Author Certificate has been issued for UM-1 lubricating grease made from mineral oil, cerezin, and an antioxidant additive. To increase the low-temperature properties of the grease, vinyl cyclohexane is suggested as an additional ingredient. Diphenylamine is used as the antioxidant additive.

[Translation]

[NT]

SUB CODE: 11/SUBM DATE: 01Jul65/

Card 1/1

UDC: 621.892.5.621.892.091

MATYUSHIN, R. N., jt. su.

Our experience in rapid drilling Moskva, Gos. nauchno-tekhn. izd-vo neftianoi i
gorno-toplivnoi lit-ry, 1952. 97 p. (Opyt novatorov- neftianikov) (53-34149)

TN874.R9K8

MATYUSHIN, R.N.

IL'IN, N.G.; MATYUSHIN, R.N.; KHAKIMOV, M.G.; PETROVA, Ye.A., redaktor;
TROFIMOV, A.V., tekhnicheskii redaktor

[Water flushing in oil well drilling] Opyt burenia skvazhin s
promyvoi vodoi. Moskva, Gos. nauchno-tekhnicheskoe izd-vo nef'tianoi
i gorno-toplivnoi lit-ry, 1954. 23 p. (MIRA 8:3)
(Oil well drilling)

MATYUSHIN, R.

AID P - 40

Subject : USSR/Mining

Card 1/1 Pub. 78 - 4/27

Authors : Yevstigneyev, K., Matyushin, R.^N and Salov, V.

Title : Well drilling with forced water flushing

Periodical : Neft. Khoz., v. 32, #6, 17-22, Ju 1954

Abstract : Improvements for reduction of the cost of drilling in various oil fields of the Tuymazaburneft' trust are described. The improvements are related mainly to adoption of modern technological processes and modification of outdated technical standards and regulations. Water flushing in drilling is widely used instead of the drilling fluids with mud in order to increase the speed and to reduce the required power for pumping. The hydraulic resistance of water is about 30% less than that of drilling mud fluids and the power for water pumps is about half as large as that for the drilling fluids. Comparative drilling operation data are presented in two tables.

Institution : None

Submitted : No date

MATYUSHIN, R. N.

AID P - 2736

Subject : USSR/Mining
Card 1/1 Pub. 78 - 6/22
Author : Matyushin, R. N.
Title : ~~A simplified method of orientation of the deflector~~
in deflected directional drilling
Periodical : Neft. khoz., 33, 7, 32-36, J1 1955
Abstract : In order to drill deflecting wells, a method is
suggested of directing properly the deflecting
tube which forces the bit to drill at the desired
depth and at the desired angle in the desired
direction.
Institution : None
Submitted : No date

MATYUSHIN, V. M.

"Peculiarities of Operation and Production of Slotting Tools," Stanki i Instrument,
10, No. 7, 1939, Moscow Tool Plant, Engineer.

Report U-1505, 4 Oct 1951.

MATYUSHIN, V. M., Docent

"A New Design for Brooches" Stan'ki I Instrument, 17, Nos 2-3, 1946

BR-52059019

MATYUSHIN, V. M., Docent

"Checking of Modular Worm Hobs by Rolling with Master Gears", Stanki I Instrument,
17 Nos 4-5, 1946.

BB-52059019

MATYUSHIN, V. M. Docent

"Grinding Slotting Tools on Masag Gear Grinding Machines," Stanki I Instrument, 17,
No. 6, 1946.

BR-52059019

MATYUSHIN, V. M.

Zuboreznye dolbiaki; tekhnologiya proizvodstva i kontrolya.

Moskva, Mashgiz, 1948. 136, (4) p. diagrs.

Bibliography: p. 136-(137).

(Gear shaper cutters; technique of production and control.)

DLC: TJ187.M3

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.